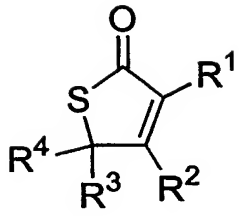
We claim:

:

--1. A compound of formula:



I

wherein:

$R^1 = H$

R^2 = -OH, $-OR^5$, $-OCH_2C(O)R^5$, $-OCH_2C(O)NHR^5$, $-OC(O)R^5$, $-OC(O)OR^5$, $-OC(O)NHNH-R^5$, or $-OC(O)NR^5R^6$, where R^5 is H, C_1-C_{20} alkyl, cycloalkyl, alkenyl, alkynyl, aryl, arylalkyl, or alkylaryl, and where R^5 can optionally contain halogen atoms;

R^3 and R^4, the same or different from each other, are C_1-C_{20} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl;

with the proviso that when R^2 is –OH, $-OCH_3$, or $-OC(O)CF_3$ and R_3 is $-CH_3$, then R_4 is not – CH_2CH_2OH, $-CH_2-(C_6H_5)$, or – CH=CH-CH_3, and

and the further proviso that when R^3 is $-CH_2-(C_6H_5)$, then R^4 is not $-CH_3$ or $-CH_2CH_3$.

2. A compound according to claim 1, wherein R^5 is H, C_1-C_{10} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl.

3. A compound according to claim 2, wherein R^5 is H, or C_1-C_{10} alkyl.

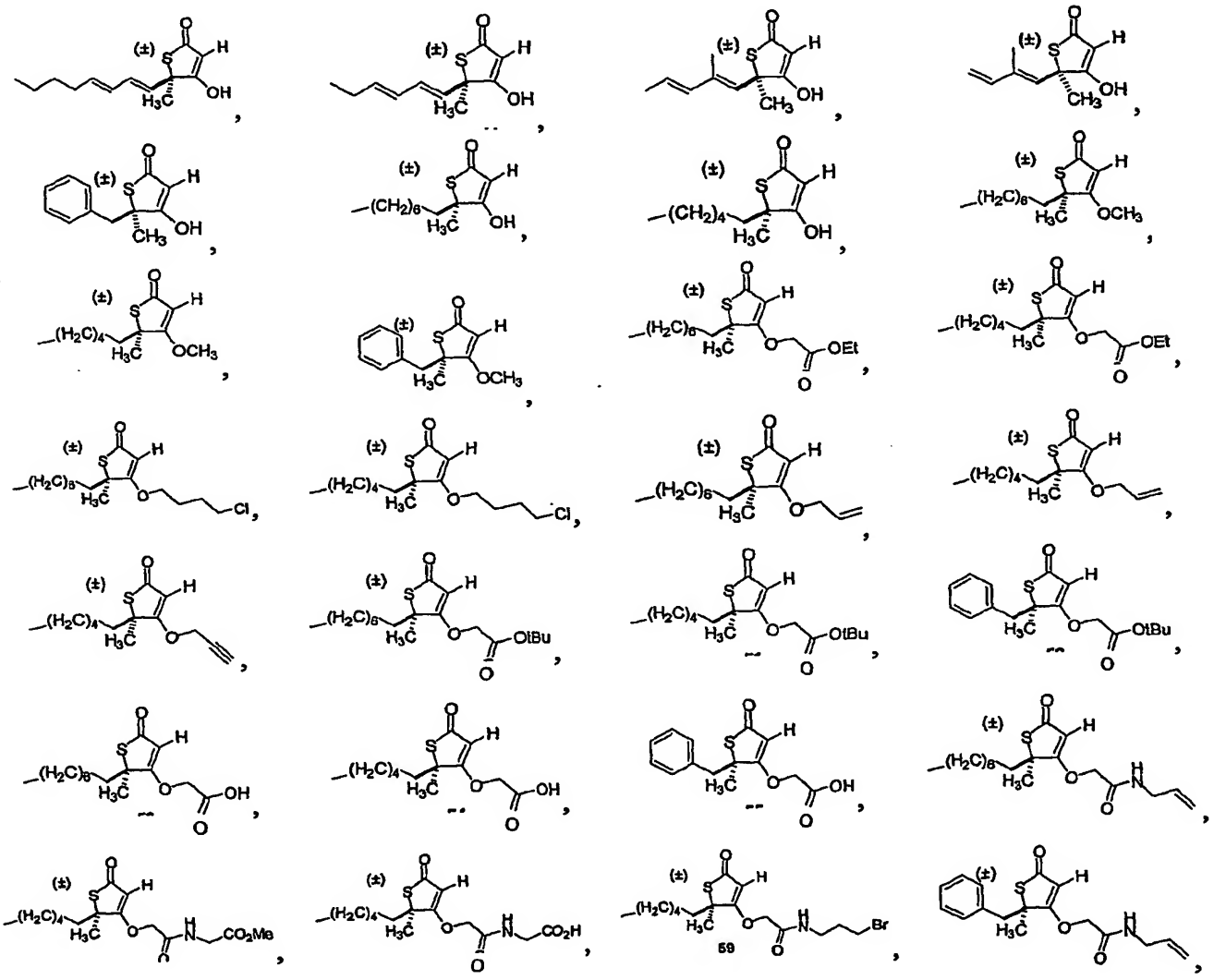
4. A compound according to claim 1, wherein R^3 and R^4 are each independently H, C_1-C_{10} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl.

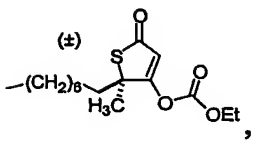
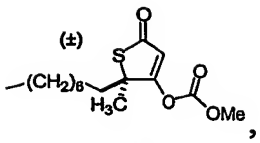
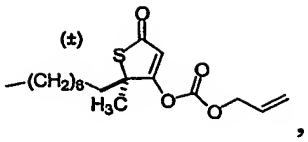
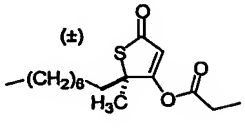
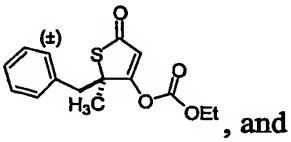
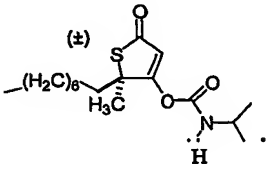
5. A compound according to claim 4, wherein R^3 and R^4 are each independently H, or C_1-C_{10} alkyl.

6. A compound according to claim 1, wherein, R^3 is –H or –CH_3.

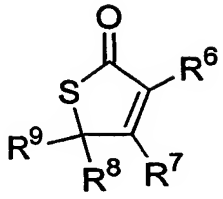
7. A compound according to claim 1, wherein R^4 is –nC_6-C_8 alkyl.

8. A compound according to claim 1, wherein the compound is selected from the group consisting of



9. A compound of formula II:



II

wherein

$R^6 = C_2$-C_{20} alkyl, cycloalkyl, alkenyl, alkynyl, aryl, arylalkyl, or alkylaryl, $-CHR^{10}OR^{11}$, $-CO(O)R^{10}$, $-C(O)NR^{10}R^{11}$, $-CH_2C(O)R^{10}$, or $-CH_2C(O)NHR^{10}$, where R^{10} and R^{11} are each independently H, C_1-C_{10} alkyl, cycloalkyl, alkenyl, alkynyl, aryl, arylalkyl, or alkylaryl, optionally containing halogen atoms, but R^6 is not di-, tri-, or tetra-alkyl substituted phenyl,

R^7 = -OH, $-OR^{12}$, $-OCH_2C(O)R^{12}$, $-OCH_2C(O)NHR^{12}$, $-OC(O)R^{12}$, $-OC(O)OR^{12}$, OC(O)NHNH-R or $-OC(O)NR^{12}R^{13}$, where R^{12} and R^{13} are each independently H, C_1-C_{20} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl, and where R^{12} and R^{13} can optionally contain halogen atoms;

R^8 and R^9, the same or different from each other, are C_1-C_{20} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl,

with the following provisos:

when R^6 is ethyl, if R^8 and R^9 are not the same, then R^8 or R^9 are not ethyl, $-CH_2COOH$, $-CH_2C(O)NH_2$, $-CH_2-(C_6H_5)$, but R^8 and R^9 can be the same, even if R^6 is ethyl, and

when R^6 is phenyl, and R^7 is –OH, R^8 and R^9 cannot simultaneously be $-CH_3$ and -propenyl, and

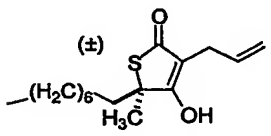
when R^6 is phenyl, R^8 and R^9 cannot simultaneously be $-CH_3$ or $-CH_2-(C_6H_5)$.

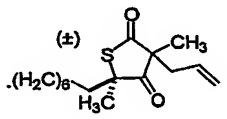
10. A compound according to claim 9, wherein R^{10} is C_1-C_{10} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl.

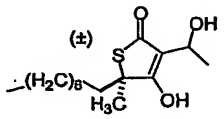
11. A compound according to claim 9, wherein R^8 is –H or $-CH_3$.

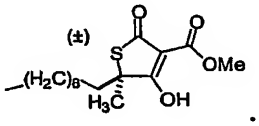
12. A compound according to claim 9, wherein R^9 is $-nC_6$-C_8 alkyl.

13. A compound according to claim 9, wherein the compound is selected from the group consisting of:

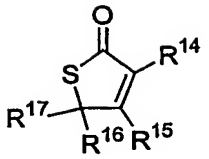


,


,


, and


14. A compound of formula III:



III

wherein

$R^{14} = -C(O)R^{18}$, where R^{18} is H, C_1-C_{10} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl, optionally containing halogen atoms.

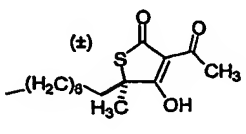
R^{15} = -OH, $-OR^{19}$, $-OCH_2C(O)R^{19}$, $-OCH_2C(O)NHR^{19}$, $-OC(O)R^{19}$, $-OC(O)OR^{19}$, $-OC(O)NHNH-R^{19}$, or $-OC(O)NR^{19}R^{20}$, where R^{19} and R^{20} are each independently H, C_1-C_{20} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl, and where R^{19} and R^{20} can each optionally contain halogen atoms;

R^{16} and R^{17}, the same or different from each other, are C_1-C_{20} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl,

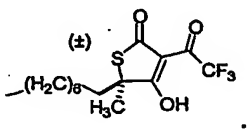
with the following provisos:

- when R^{14} is $-C(O)CH_3$, and R^{16} and R^{17} are not identical, then either R^{16} or R^{17} are not are not geranyl, p-fluorobenzyl, cinnamyl, farnesyl, methyl, or $-CH_2-(C_6H_5)$, and
- when R^{14} is $-C(O)C_6H_5$, then either R^{16} or R^{17} are not are not methyl.

15. A compound according to claim 14, wherein the compound is selected from the group consisting of:

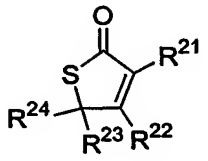


, and



.

16. A pharmaceutical composition comprising a phamaceurtical diluent and a compound of formula IV:



IV

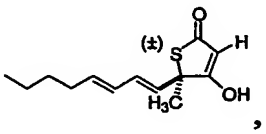
wherein:

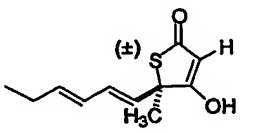
R^{21} = H, C_1-C_{20} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl, $-CH_2OR^{25}$, $-C(O)R^{25}$, $-CO(O)R^{25}$, $-C(O)NR^{25}R^{26}$, $-CH_2C(O)R^{25}$, or $-CH_2C(O)NHR^{25}$, where R^{25} and R^{26} are each independently H, C_1-C_{10} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl, optionally containing one or more halogen atoms.

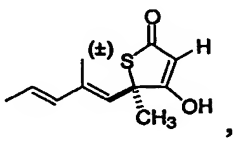
R^{22} = -OH, $-OR^{27}$, $-OCH_2C(O)R^{27}$, $-OCH_2C(O)NHR^{27}$, $-OC(O)R^{27}$, $-OC(O)OR^{27}$, $OC(O)NHNH-R^{27}$, or $-OC(O)NR^{27}R^{28}$, where R^{27} and R^{28} are each independently H, C_1-C_{20} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl, and where R^{27} and R^{28} can each optionally contain halogen atoms;

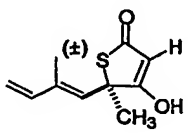
R^{23} and R^{24}, the same or different from each other, are C_1-C_{20} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl.

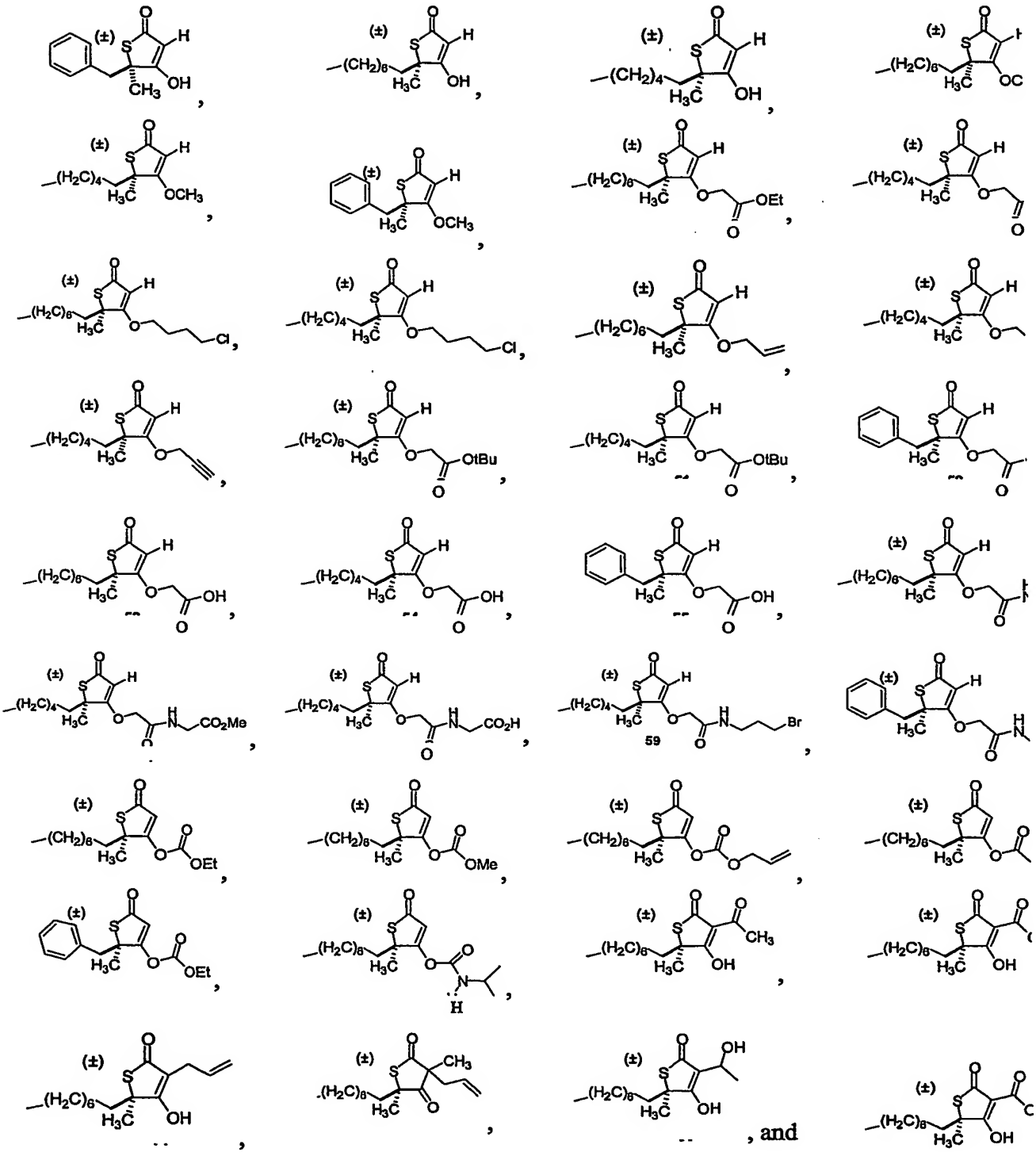
17. A pharmaceutical composition according to claim 16, wherein the compound is selected from the group consisting of:











, and

18. A pharmaceutical composition comprising a phamaceurtical diluent and a compound of formula I.

19. A pharmaceutical composition comprising a phamaceurtical diluent and a compound of formula II.

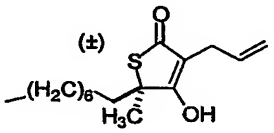
20. A pharmaceutical composition comprising a phamaceurtical diluent and a compound of formula III.

21. A method of inducing weight loss in an animal or human subject comprising administering an effective amount of a pharmaceutical composition according to claim 16 to said subject.

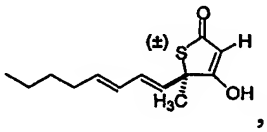
22. The method of claim 21, wherein the subject is a human.

23. The method of claim 21, wherein the subject is an animal.

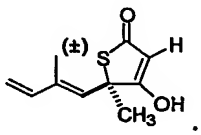
24. The method of claim 22, wherein the pharmaceutical composition comprises a compound selected from the group consisting of:



,

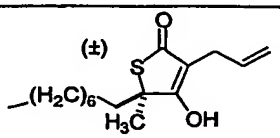
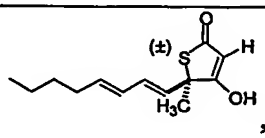
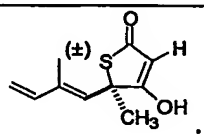


, and



.

25. The method of claim 23, wherein the pharmaceutical composition comprises a compound selected from the group consisting of:

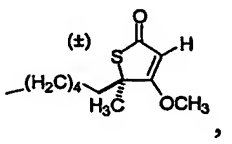
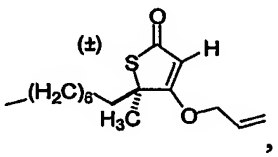
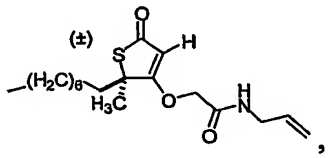
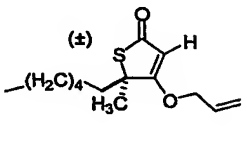
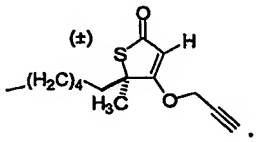
 ,	 , and	 .

26. A method of treating cancer in an animal or human subject, comprising administering an effective amount of a pharmaceutical composition according to claim 16 to said subject.

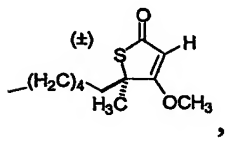
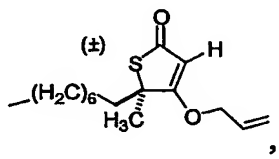
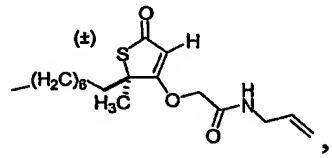
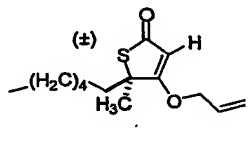
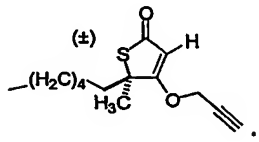
27. The method of claim 26, wherein the subject is a human.

28. The method of claim 26, wherein the subject is an animal.

29. The method of claim 27, wherein the pharmaceutical composition comprises a compound selected from the group consisting of:

30. The method of claim 28, wherein the pharmaceutical composition comprises a compound selected from the group consisting of:

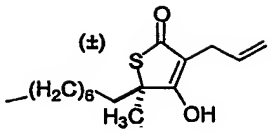






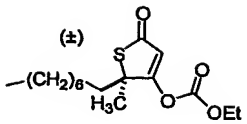
31. A method of stimulating the activity of CPT-1 in an animal or human subject comprising administering an effective amount of a pharmaceutical composition according to claim 16 to said subject.

32. The method of claim 31, wherein the subject is a human.

33. The method of claim 31, wherein the subject is an animal.

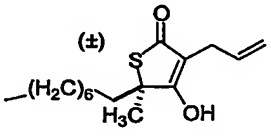
34. The method of claim 32, wherein the compound is selected from the group consisting of:

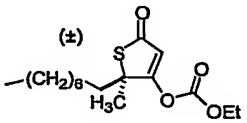




, and

35. The method of claim 33, wherein the compound is selected from the group consisting of:





, and

36. A method of inhibiting the activity of neuropeptide-Y in an animal or human subject comprising administering an effective amount of a pharmaceutical composition according to claim 16 to said subject.

37. The method of claim 36, wherein the subject is a human.

38. The method of claim 36, wherein the subject is an animal.

39. A method of inhibiting fatty acid synthase activity in an animal or human subject comprising administering an effective amount of a pharmaceutical composition according to claim 16 to said subject.

40. The method of claim 16, wherein the subject is a human.

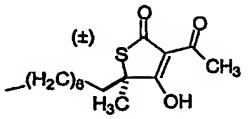
41. The method of claim 16, wherein the subject is an animal.

42. A method of inhibiting growth of invasive microbial cells in an animal or human subject comprising the administration of an effective amount of a pharmaceutical composition according to claim 16 to said subject.

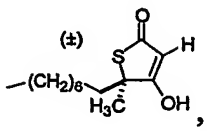
43. The method of claim 42, wherein the subject is a human.

44. The method of claim 42, wherein the subject is an animal.

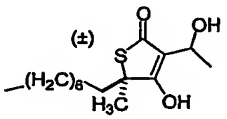
45. The method of claim 43, wherein the compound is selected from the group consisting of:



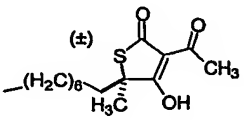
, and



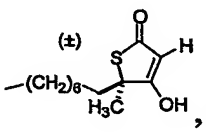
, and



46. The method of claim 44, wherein the compound is selected from the group consisting of:



, and



, and